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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,846	12/08/2003	Peter Larsson	4147-55	8306
23117 7590 09/30/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
JUNTIMA, NITTAYA				
ART UNIT		PAPER NUMBER		
2616				
MAIL DATE		DELIVERY MODE		
09/30/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/729,846

**Applicant(s)**

LARSSON ET AL.

**Examiner**

NITTAYA JUNTIMA

**Art Unit**

2616

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 and 47-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-45, 47, 48, 51, 52 and 55 is/are allowed.
- 6) ☒ Claim(s) 49, 50, 53 and 54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB08)
- Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is in response to the amendment filed on 5/21/2008.
2. Claims 1-45 and 47-55 are pending.
3. Claims 1-45, 47-48, 51-52, and 55 are allowed.
4. Claims 49 and 50 are currently rejected 35 U.S.C. 102 (e).
5. Claims 53 and 54 are currently rejected 35 U.S.C. 103 (a).

#### ***Claim Objections***

6. Claim 51 is objected to because of the following informalities:
  - claim 51, line 1, "46" should be changed to "47" as claim 46 was canceled.Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. **Claims 49 and 50** are rejected under 35 U.S.C. 102(e) as being anticipated by Larsen (US 6,965,568 B1).

Regarding **claim 49**, as shown in Fig. 1, Larsen teaches a control node (a microprocessor-based controller 10) in a packet radio multi-hop network, said control node comprising:

Means for jointly selecting, for at least one transmitting node (a network station shown in Fig. 1, col. 6, lines 4-7) in the multi-hop network, a combination of i) relay node (an intermediate station) among multiple relay candidate nodes and ii) destination node (a destination station associated with the destination address of a message being relayed) among multiple destination nodes represented in the transmit queue (stack, Fig. 3) of said at least one transmitting node and iii) at least one link parameter representing modulation and coding scheme (since packet is transmitted over a wireless network, a modulation and coding scheme must be selected for transmission over a radio link). See col. 6, lines 8-12, 37-54 and col. 7, lines 17-36 and Fig. 3.

Means (elements 20, 18, and 14 in Fig. 1, collectively) for transmitting information on the selected destination node and relay node and link parameter(s) representing modulation and coding scheme to said at least one transmitting node, thereby enabling forwarding of data heading for the selected destination node from said at least one transmitting node to the selected relay node based on selected modulation and coding scheme (col. 7, lines 27-36 and Fig. 3).

Regarding **claim 50**, as shown in Fig. 1, Larsen teaches a control node (a microprocessor-based controller 10) in a packet radio multi-hop network, said control node comprising:

Means for jointly selecting, for at least one transmitting node (a network station

shown in Fig. 1, col. 6, lines 4-7) in the multi-hop network, a combination of i) relay node (an intermediate station) among multiple relay candidate nodes and ii) flow (a voice or video message selected for relaying is part of a voice/video stream, Fig. 1) among multiple flows represented in said at least one transmitting node and iii) at least one link parameter representing modulation and coding scheme (since packet is transmitted over a wireless network, a modulation and coding scheme must be selected for transmission over a radio link). See col. 6, lines 8-12, 37-54 and col. 7, lines 17-36 and Fig. 3.

Means (elements 20, 18, and 14 in Fig. 1, collectively) for transmitting information on the selected destination node and relay node and link parameter(s) representing modulation and coding scheme to said at least one transmitting node, thereby enabling forwarding of data heading for the selected destination node from said at least one transmitting node to the selected relay node based on selected modulation and coding scheme (col. 7, lines 27-36 and Fig. 3).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 53 and 54** are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen (US 6,965,568 B1) in view of Chandler (GB002369532A).

Regarding **claims 53 and 54**, Larsen fails to explicitly teach that said means for jointly selecting operates at least partly based on cost information from an underlying route determination protocol.

However, Chandler teaches that means (call control means and station selection means, collectively) for jointly selecting operates at least partly based on cost information from an underlying route determination protocol (page 3, lines 1-page 54, lines 9).

Given the teaching of Chandler, it would have been obvious to one skilled in the art at the time of the invention to modify the teaching of Larsen such that said means for jointly selecting would operate at least partly based on cost information from an underlying route determination protocol as claim. The suggestion/motivation to do so would have been to enable a node to select a relay station on a basis of minimizing cost of routing to a destination as taught by Larsen (page 3, lines 31-page 4, lines 2).

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NITTAYA JUNTIMA whose telephone number is (571)272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nittaya Juntima/  
Examiner, Art Unit 2616  
8/31/2008

/FIRMIN BACKER/  
Supervisory Patent Examiner, Art Unit 2616

